

REMARKS

Applicants submit the phrase "can be folded" in claims 1 and 18 is clear in meaning and is commonly used in claims to define various inventions. For example, U.S. Patent No. 6,588,129 claims a greeting card where a "first section can be folded over said second section," in the embodiment defined in claim 6. The phrase also appears in claim 1 of U.S. Patent No. 6,597,086, claim 6 of U.S. Patent No. 6,584,717 and claim 10 of U.S. Patent No. 6,532,756. A search on the U.S.P.T.O. database for the phrase "can be folded" within claims of patents which issued after 1976 resulted in 1,566 hits. The phrase is clearly well accepted and Applicants use of the phrase in defining the substrates of claims 1 and 18 is consistent with the use within these issued patents. As the Examiner recognized, the substrate only needs to have the ability to be folded and does not actually have to be folded.

While not ambiguous or indefinite, Applicants agree the phrase is not necessary to define the invention and that the fold lines are adequately defined in the subsequent paragraphs of claims 1 and 18 without this phrase. Therefore, the phrase has been deleted although the rejection has been traversed.

The amendment to claims 1 and 18 which inserts a recitation of the presence of ties between the microperforations is an inherent feature. This language has been added to clarify the intermittent non-perforated areas are not ties.

These amendments have not been made for purposes of patentability.

Claim Rejections Under 35 U.S.C §102

Tataryan, et. al. (U.S. Patent No. 6,136,130) does not anticipate the present invention in that the printable substrate disclosed and claimed in this reference has a fold line comprised of "cuts and ties". (See claim 1, column 4, and lines 1-3, and column 4, lines 34-37). The language referred to at lines 47-57 of column 4 refers to varying the specific dimension and size of "the cuts and ties for perforations." There is no indication anywhere in this reference that the individual cuts can be individual microperforations or a discontinuous line of microperforations (with ties between them) spaced with intermittent nonperforated portions as claimed herein.

While Tataryan, et. al. disclose the dimensions and size of the cuts and ties can vary, there is no indication they can vary on a given line. Therefore, Tataryan, et al. does not even disclose the use of fold lines comprising perforations and both ties and intermittent nonperforated portions, let alone the fold lines of this invention. Therefore, Tataryan, et al does not anticipate any of the substrates of claims 1-19 herein.

At column 2, lines 27-31 Tataryan, et. al. states that:

"one currently popular type of perforations is known as microperforations, using ties which are less than 0.01 inch in width. The cuts between the ties may range from about 1/8 inch to less than 0.01 inch.

Here Tataryan, et al. describe microperforations as a type of perforation of a size from 1/8 inch to less than 0.01 inch between ties less than 0.01 inch in width. There is no indication that microperforations are considered suitable cuts or perforations for the fold lines of the sheets provided by Tataryan, et al. There is also no indication that the size of the microperforations or the spaces between them can vary on a given fold line.

It is alleged that Taratyan, et al. inherently provides for a discontinuous line of perforations with intermittent non perforated areas based on the disclosure at column 4, lines 47-57. However, based on the following disclosure at column 2, lines 31-35, of U.S. Patent 5,662,976,

"these microperforations form the weakened line across the sheet that was greatly weakened by a fold along the perforations, so that the sheets require less than 1 or 2 kilograms of force for separation, and these weakened sheets did not print reliably following folding and unfolding."

Tataryan, et. al. suggests that reference to "perforations" does not include "microperforations" since sheets with microperforations did not print reliably.

Since there is no clear indication by Tataryan, et. al that the "cuts" or the perforations referred to at Col 4, lines 47-57 include microperforations and there is a suggestion by Tataryan, et. al they do not, the reference to "variations.....in the nature of the lines of weakness," such as "the specific dimensions of and the size of the cuts and ties or perforations," does not inherently

anticipate the invention.

This language even fails to suggest that the fold line of figure 1, (24), can be a discontinuous line of perforations, with both ties and intermittent non-perforated areas, let alone a fold line of this invention. Figure 1 of Tataryan, et. al shows only ties between perforations for fold line 24. Fold line 24 does not have any non-perforated areas between perforations.

Based on the above remarks, Tataryan, et. al. does not anticipate any of Claims 1-19 herein.

Claim Rejections Under 35 U.S.C §103

Popat, et. al. (U.S. Patent No. 5,662,976) discloses a laminated card assembly which employs microperforations to enable the separation of sections. (See column 3, lines 30-34). Popat, et. al. does not disclose employing microperforations to provide a fold line for a printable substrate. Popat, et al. does disclose the use of perforations in fold lines (82) for a lamination strip. However,

- 1) there is no indication these perforations can comprise microperforations,
- 2) there is no indication that the perforations can be discontinuous with both ties and intermittent non-perforated areas ,
- 3) there is no indication that the lamination strip can be unfolded once folded, and
- 4) there is no indication the lamination strip can receive print.

Therefore, the teachings of Popat, et. al. add nothing to those of Tataryan, et. al. to show or suggest the use of discontinuous microperforations to provide a fold line. Therefore, none of the pending claims (claims 1-19), are obvious in view of the combined teachings of Tataryan, et. al. and Popat, et. al.

Janssen

Janssen (U.S. Patent No. 3,547,752) describes the use of weakened lines within a substrate to permit the sheet to conform to a curved platen such as a roller. There is no hint or suggestion how to provide a weakened substrate with fold lines or how to weaken the substrate

with discontinuous microperforations and both ties and intermittent non-perforated areas. The configuration of Janssen uniformly weakens the substrate and does not provide for a preferred location of a fold line. Therefore, the teachings of Janssen add nothing to those of Tataryan, et. al. or Popat, et. al. to render the claims herein obvious.

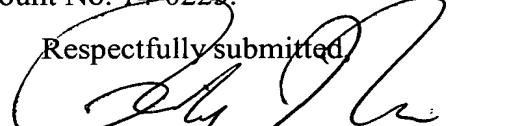
Furthermore, there is no motivation to locate non perforated sections to be in-line where the feed rollers engage the substrate.

The combined teachings of the cited references show nothing more than the use of microperforations to provide a line of separation. There is no hint or suggestion that microperforations can weaken a substrate to provide only a fold line and not a line of separation.

In addition, the combined teachings of the cited references provide no motivation to form a discontinuous line of microperforations with both ties and intermittent portions of non-perforated areas.

Based on the above remarks, Applicants submit claims 1-19 are in a form suitable for allowance and patentable over the cited references. Therefore, withdrawal of the rejections and allowance of these claims are earnestly solicited.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 14-0225.

Respectfully submitted,


Richard J. Traverso, Reg. No. 30,595
Representative Capacity

Please forward correspondence to:

Douglas S. Foote, Law Vice President
NCR
Intellectual Property Section, Law Department
1700 South Patterson Blvd., WHQ5E
Dayton, Ohio 45479-0001

Attorney Docket No.: 9059.00/NCRCO-96X

Date: August 18, 2003

RJT:jqs

K:\Ncrco\96x\REPLY 8-18-03.doc